



Contribution ID: 3

Type: **Poster Presentation**

Angular distribution of the Isovector giant dipole resonance (IVGDR) in neutron-rich calcium isotopes with proton inelastic scattering reaction at 200 MeV

Wednesday, 10 July 2013 17:40 (1 hour)

**Abstract content
 (Max 300 words)**

High energy-resolution proton inelastic scattering experiments have been extensively explored during the last decade at iThemba LABS, Somerset West, South Africa. This is with a view to understanding the structure of giant resonances in nuclei across the periodic table. Fine structure of the Isovector Giant Dipole Resonance (IVGDR) in isotopes of calcium (42, 44, 48Ca) has been proposed to be investigated using (p, p') reaction at 200 MeV. Distorted Wave Born Approximation (DWBA) calculations have been used to determine angular distributions of the prominent E1 states up to the region of the IVGDR. The experimental investigation will be carried out with the recently developed Zero-degree Facility of the K600 Magnetic spectrometer of iThemba LABS.

**Apply to be
 considered for a student
 award (Yes / No)?**

Yes

**Level for award
 (Hons, MSc,
 PhD)?**

PhD

**Main supervisor (name and email)
and his / her institution**

I.T. Usman (Iyabo.Usman@wits.ac.za). School of Physics, University of the Witwatersrand, Johannesburg, 2050

**Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?**

No

Primary author: Mr LATIF, Mouftahou (Wits)

Co-authors: RICHTER, Achim (Institute fur Kernphysik, TU Darmstadt); KRUGMANN, Andreas (Institute fur Kernphysik, TU Darmstadt); TAMII, Atsushi (Research Centre for Nuclear Physics, Osaka University); SMIT,

Fredrick (iThemba LABS); COOPER, Gordon (Wits); FUJITA, Hirohiko (Research Centre for Nuclear Physics, Osaka University); Dr USMAN, Iyabo (Wits); CARTER, John (Wits); DONALDSON, Lindsay (Wits); JINGO, Maxwell (Wits); PIETRALLA, Norbert (Institute für Kernphysik, TU Darmstadt); KUREBA, Oscar (Wits); PAPKA, Paul (SU); VON NEUMAN-COSEL, Peter (Institute für Kernphysik, TU Darmstadt); NEVELING, Retief (iThemba LABS); FEARICK, Roger (UCT); ELIAS, Sideras-Hadad (Wits); FORTSCH, Siegie (iThemba LABS); FUJITA, Yoshitaka (Department of Physics, Osaka University); BUTHELEZI, Zinhle (iThemba LABS)

Presenter: Mr LATIF, Mouftahou (Wits)

Session Classification: Poster2

Track Classification: Track B - Nuclear, Particle and Radiation Physics